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PROFESSIONAL PREPARATION

Teachers College, Columbia University	Developmental Psychology	Ph.D.–1999
Teachers College, Columbia University	Developmental Psychology	M.A.–1993
Amherst College	English	B.A.–1988

CURRENT POSITION

Principal Research Scientist, Technology Research and Development, EDC

OVERVIEW OF RESEARCH AND EVALUATION EXPERTISE

- **Research Foci:** Innovative science and computational science curricula; digital games for learning; technology integration; educational technology policy
- Project leadership and management, including coordination of multi-site evaluation and research studies and client management
- Development and implementation of rigorous, mixed-method research studies and evaluations
- Extensive knowledge of educational technology research and development

SELECTED RESEARCH EXPERIENCE

Co-principal Investigator, *Planning a Design-Based Implementation Research Agenda to Investigate Digital Badges as Transformative Assessment in Informal Science Learning.* Funded by the National Science Foundation, the Wellcome Trust (UK), and the Economic and Social Research Council (UK), 2015–2016. Facilitate cross-institutional planning for a program of research to guide coordination of evaluation and assessment practices across formal and informal science learning environments in New York City.

Co-principal Investigator, *Digital Games as Analogical Sources for Science Learning,* Funded by the National Science Foundation REESE program (EHR/DRL), 2013–present. Investigate how representational strategies used in educational video games play shape the games' utility as a prior experience to support teaching and learning of difficult middle school science concepts.

Co-principal Investigator, *Zoom In,* Funded by the Bill & Melinda Gates Foundation, 2012–present. Develop and oversee research agenda for a research and development project creating digital professional development supports for middle grades history and social studies teachers adopting the Common Core literacy standards and working with primary source documents.

Co-principal Investigator, *National Research and Development Center on Instructional Technology.* Funded by the Institute for Education Sciences, U.S. Department of Education, 2008–2013 (Principal investigator 2013–2014). Develop and oversee research agenda for project developing seventh grade science games for handheld electronic devices. Coordinate formative research activities with the development team; conduct a series of supplementary studies on conceptual change, scientific misconceptions and scaffolding science instruction; design and implement a rigorous evaluation of implementation of the games in classrooms on student learning.

Director of Research, *Regional Educational Laboratory, Northeast and the Islands (REL-NEI)* (2007–2010). Oversee development and implementation of all research projects, including randomized controlled trial (RCT) studies of interventions in school and early childhood settings. Identify promising candidate interventions for RCT studies and lead development of study plans including research design, rationale, and development of partnerships to support implementation. Develop overall research agenda and

strategy for the REL-NEI. Ensure compliance with Institute of Education Sciences (IES) requirements for research; ensure up-to-date and innovative research strategies are integrated into all phases of the research program; contribute to planning and implementation of needs assessment and dissemination activities; supervise task managers; contribute to overall management and planning.

Co-principal Investigator, *Portable Word Play* (2010–2012). Develop and oversee research agenda for a project developing games for handheld electronic devices that will support literacy development for struggling readers in the middle grades.

Project Director, *Evaluation of Intel Corporation Innovation in Education K–12 Professional Development Programs* (2000–2006). Intel developed a teacher professional development program that is focused on helping teachers learn how to integrate technology into their practice. Directed formative and outcome evaluations of multiple large-scale implementations of the program in the U.S. and provided consultation on program evaluation in other countries.

Project Director, *Evaluation of Intel Corporation's Computer Clubhouse Network After-School Technology program* (2000–2003). Directed formative and outcome evaluations of large-scale program intended to support youth engagement with technology in informal settings.

Project Director, *Investigating Technology Integration in Chicago's Elementary Schools* (1997–1998). Investigated the opportunities and obstacles to effective integration of technology in schools with significant instructional technology plans in place to inform foundation planning.

SELECTED PUBLICATIONS AND PRESENTATIONS

Culp, K.M., Martin, W., Clements, M., & Presser, A.L. (2014). Testing the impact of a pre-instructional digital game on middle-grade students' understanding of photosynthesis. Technology, Knowledge and Learning. Published online August 17, 2014. DOI: 10.1007/s10758-014-9233-5.

Goldenberg, L., Culp, K.M., Clements, M., Anderson, A., Pasquale, M. (2014). Online professional development for high-school biology teachers: Effects on teachers' and students' knowledge. Journal of Technology and Teacher Education, 22(3), 287-309.

Culp, K.M. (2014, April). Using digital games to help teachers explore difficult middle grade science concepts. Presented as part of an invited panel on "Games for Learning, Research and Development." The Center for Research on Evaluation, Standards and Student Testing (CRESST) 2014 Annual Conference, Redondo Beach, CA.

Culp, K.M. (2014, April). Testing the impact of a pre-instructional digital game on middle-grade students' understanding of photosynthesis. Paper presented at the Annual Meeting of the American Educational Research Association, Philadelphia, PA.

Culp, K.M., Osterweill, S., Chung, C., & Pasnik, S. (2013, March). When and where is the game? Panel discussion on the instructional design of games for learning at the SXSW.edu conference, Austin, TX.

Culp, K.M., McDermott, M., Diamond, J., & Keane, J. (2013, March). Who gets to learn how?: Youth as actors and subjects in civic education contexts. Panel at the Digital Media & Learning Conference, Chicago IL.

Heppen, J.B., Walters, K., Clements, M., Faria, A., Tobey, C., Sorensen, N., and Culp, K. (2012). Access to Algebra I: The effects of online mathematics for grade 8 students. (NCEE 2012–4021). Washington, DC: National Center for Education Evaluation and Regional Assistance, Institute of Education Sciences, U.S. Department of Education.

Culp, K.M. (2012, September). Possible Worlds: Building games to enhance teaching of difficult science concepts. Invited presentation at the Institute for Education Sciences/U.S. Department of Education Principal Investigator's meeting. Washington, DC.

Drummond, K., Chinen, M., Duncan, T.G., Miller, H.R., Fryer, L., Zmach, C. Culp, K. (2011). Impact of the Thinking Reader® software program on grade 6 reading vocabulary, comprehension, strategies, and motivation. NCEE 2010-4035. Washington DC: U.S. Department of Education.

Culp, K. M. (2010). Response to "Learning context: Gaming, simulations, and science learning in the classroom" by Chris Dede. Included in National Research Council Board on Science Education's Committee on Learning Science (Ed), Proceedings of a workshop on gaming, simulation and education. Washington, DC: National Research Council.

Martin, W., Strother, S., Beglau, M., Bates, L., Reitzes, T., & McMillan Culp, K. (2010). Connecting instructional technology professional development to teacher and student outcomes. Journal of Research on Technology in Education, 43(1), 53-74.

Culp, K. M. (2010). Technology as a support for school-community connections. In Baker, E., B. McGaw, & P. Peterson (Eds), International Encyclopedia of Education (3rd Ed.). Maryland Heights, Missouri: Elsevier Press.

Kanaya, T., Light, D., & Culp, K. M. (2005, Spring). Factors influencing outcomes from a technology-focused professional development program. Journal of Research on Technology Education, 37(3).

Culp, K. M., Honey, M., & Mandinach, E. (2003). A retrospective on twenty years of education technology policy. Commissioned by the American Institutes for Research to inform the development of the National Education Technology Plan. Washington, DC: U.S. Department of Education, Office of Educational Technology.

Culp, K. M., Honey, M., & Spielvogel, B. (2003). Local relevance and generalizability: Linking evaluation to school improvement. In B. Mean & G. Haertel (Eds.), New approaches to evaluating the impact of educational technology. New York: Teachers College Press.

Bennett, D., Culp, K. M., Honey, M., Tally, B., & Spielvogel, B. (2001). It all depends: Strategies for designing technologies for education change. In W. Heinecke & L. Blasi (Eds.), Methods of evaluating educational technology. Greenwich, CT: Information Age Publishing, Inc.

Honey, M., Culp, K. M., & Carrigg, F. (1999). Perspectives on technology and education research: Lessons from the past and present. Paper commissioned for the Secretary's Conference on Evaluating Educational Technology. Washington, DC: U.S. Department of Education.

Culp, K.M. (2011, June). Games as metaphor primers. Presentation at the Games for Learning Institute day, Games for Change conference, New York, NY.

Culp, K.M. (2009, October). Response to "Learning context: Gaming, simulations, and science learning in the classroom" by Chris Dede. Invited presentation at a Workshop on Gaming, Simulation and Science Education. National Research Council's (NRC) Board on Science Education's Committee on Learning Science, Washington, DC.

Wexler, D., & Culp, K.M. (2006, April). Rethinking professional development approaches in the digital age: What does it mean to "teach 21st century skills with technology?" Presented at the annual meeting of the American Educational Research Association, San Francisco, CA.

Martin, W., Culp, K.M., Gersick, A., & Nudell, H. (2003, April). Intel Teach to the Future: Lessons learned from the evaluation of a large-scale technology-integration professional development program. Paper presented at the annual meeting of the American Educational Research Association, Chicago, IL.

Kornblum, B., Grob, A., Livingston, K., Gordon, A, Culp, K.M., & Carter, H. (2001, October). What do we know about what's working? Researchers present data and findings. Presented at A Transatlantic Roundtable on the Role of IT in Helping Underserved Youth Fulfill Their Promise. The Benton Foundation, Washington, DC.

Honey, M, & Spielvogel, R., & Culp, K.M. (2000, February). Partnership research: Understanding technology use in the social context. Commissioned paper presented at a workshop, The Effectiveness of Educational Technology: Research Designs of the Next Decade. Palo Alto, SRI International.